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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,703	09/29/2000	Ilya A. Korisch	5123-14	1553

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EXAMINER	
MILLER, BRANDON J	

ART UNIT	PAPER NUMBER
2683	17

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/676,703	KORISCH ET AL.	
	Examiner	Art Unit	
	Brandon J Miller	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 5/28/04 .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-29 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/28/04 has been entered.

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 19-20, and 25 are rejected under 35 U.S.C. 102(e) as being unpatentable over Gratias in view of Bethea.

Regarding claim 1 Gratias teaches an apparatus comprising a unit for generating an electromagnetic field (see col. 3, lines 17-22). Gratias teaches the unit comprising: an RF circuitry portion dimensioned and arranged to generate an antenna signal (see col. 3, lines 18-21). Gratias teaches an antenna electrically coupled to an RF circuitry portion, the antenna signal generated by the RF circuitry portion (see col. 3, lines 15-22 and FIG. 1). Gratias does not specifically teach an active antenna shield including a radiation device dimensioned and arranged to generate a near field for substantially canceling the electromagnetic field in a predetermined

region. Bethea teaches an active antenna shield located in a communication device, including a radiation device dimensioned and arranged to generate a near field for substantially canceling the electromagnetic field in a predetermined region (see col. 3, lines 38-55 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include an active antenna shield including a radiation device dimensioned and arranged to generate a near field for substantially canceling the electromagnetic field in a predetermined region because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Regarding claim 2 Bethea teaches an active shield coupled to the RF circuitry portion of the device (see col. 3, lines 38-55 and FIG. 2).

Regarding claim 19 Gratias teaches a communication apparatus including a unit for generating an electromagnetic field (see col. 3, lines 17-22). Gratias teaches the unit comprising: an RF circuitry portion dimensioned and arranged to generate an antenna signal (see col. 3, lines 18-21). Gratias teaches an antenna creating an electromagnetic field in response to an antenna signal generated by the RF circuitry portion (see col. 3, lines 15-22 and FIG. 1). Gratias does not specifically teach generating a near field for substantially canceling the electromagnetic field in a predetermined region. Bethea teaches an active antenna shield located in a communication device, generating a near field for substantially canceling the electromagnetic field in a predetermined region (see col. 3, lines 38-55 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include generating a near field for substantially canceling the electromagnetic field in a predetermined

region because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Regarding claim 20 Gratias teaches creating an electromagnetic field by an antenna in a unit of a communication apparatus, in response to an antenna signal generated in the unit (see col. 3, lines 17-22). Gratias does not specifically teach generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using an active shield. Bethea teaches generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using an active shield (see col. 3, lines 38-55 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using an active shield because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Regarding claim 25 Gratias teaches an apparatus including a unit for generating an electromagnetic field (see col. 3, lines 17-22). Gratias teaches the unit creating an electromagnetic field using an antenna (see col. 3, lines 18-21). Gratias does not specifically teach generating a near field substantially canceling the electromagnetic field in a predetermined region using an active shield. Bethea teaches an active antenna shield located in a communication device, generating a near field for substantially canceling the electromagnetic field in a predetermined region (see col. 3, lines 38-55 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt

to include generating a near field substantially canceling the electromagnetic field in a predetermined region using an active shield because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Claims 3-17, 21-24, and 26-29 are rejected under 35 U.S.C. 102(e) as being unpatentable over Gratias in view of Bethea and Shattil.

Regarding claim 3 Gratias and Bethea teach a device as recited in claim 1 except for an adjustment circuit coupled between an antenna and an RF circuitry portion. Shattil teaches an adjustment circuit for adjusting the phase of a signal (see col. 4, lines 53-60 and col. 5, lines 8-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make invention adapt to include an adjustment circuit located between an antenna and an RF circuitry portion because this would allow for an efficient variable phase shifter circuit that controls the phase of a received signal from an antenna.

Regarding claim 4 Shattil teaches a coupler coupled between RF circuitry and active shield (see col. 31, lines 66-67).

Regarding claim 5 Shattil teaches a coupler coupled between RF circuitry and adjustment circuit (see col. 31, lines 66-67 and col. 32, lines 1-5).

Regarding claim 6 Gratias, Bethea, and Shattil teach a device as recited in claim 3 except for an adjustment circuit receiving a reduced antenna signal from the RF circuitry portion, and the adjustment circuit being operative to output a signal to an active shield to thereby create a near field based on a reduced antenna signal. Gratias does teach receiving a reduced antenna signal (see col. 4, lines 47-52 & 59-61). Bethea does teach outputting a signal to an active shield to create a near field based on an antenna signal (see col. 3, lines 38-55). Shattil does teach an

adjustment circuit (se col. 14, lines 4-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include an adjustment circuit receiving a reduced antenna signal from the RF circuitry portion, and the adjustment circuit being operative to output a signal to an active shield to thereby create a near field based on a reduced antenna signal because this would allow for an improved device that provides an attenuating effect to radiation from a mobile communication device.

Regarding claim 7 Gratias, Bethea, and Shattil teach a device as recited in claim 6 except for the RF circuitry portion is operative to generate a reduced antenna signal that is approximately 10 % of an antenna signal. Gratias further teaches reducing an antenna signal (see col. 4, lines 47-52 & 59-61). Although Gratias fails to disclose an antenna signal reduced by approximately 10% it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include the RF circuitry portion is operative to generate a reduced antenna signal that is approximately 10 % of an antenna signal because this would provides an improved attenuating effect to radiation from a mobile communication device.

Regarding claim 8 Shattil teaches a circuit that includes a phase shifter (see col. 7, line 11).

Regarding claim 9 Shattil teaches a circuit that includes a variable gain amplifier (see col. 14, lines 8-11).

Regarding claim 10 Bethea teaches a circuit that includes an attenuator (see col. 3, lines 64-65 and FIG. 3).

Regarding claim 11 Shattil a sensor located in proximity to an active shield (see col. 5, lines 8-9 and col. 27, lines 53-65).

Regarding claim 12 Shattil teaches a control circuit (see col. 24, lines 44-46).

Regarding claim 13 Gratias teaches a predetermined region that is near an operator's earpiece (see col. 3, lines 23-33).

Regarding claim 14 Gratias teaches a communication apparatus comprising a unit for generating an electromagnetic field (see col. 3, lines 17-22). Gratias teaches the unit comprising: an RF circuitry portion dimensioned and arranged to generate an antenna signal (see col. 3, lines 18-21). Gratias teaches an antenna electrically coupled to an RF circuitry portion, the antenna being dimensioned and arranged to generate an electromagnetic field in response to an antenna signal generated by the RF circuitry portion (see col. 3, lines 15-22 and FIG. 1). Gratias does not specifically teach a plurality of active shields, each of the plural active shields including a radiation device dimensioned and arranged to generate a near field for substantially canceling the electromagnetic field in a predetermined region. Bethea teaches an active shield, including a radiation device dimensioned and arranged to generate a near field for substantially canceling the electromagnetic field in a predetermined region (see col. 3, lines 38-55 and FIG. 2). Shattil teaches a plurality of active shielding material substantially canceling the effects of an electromagnetic field (see col. 5, lines 6-10, col. 24, lines 61-67 and col. 25, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include a plurality of active shields, each of the plural active shields including a radiation device dimensioned and arranged to generate a near field for substantially

canceling the electromagnetic field in a predetermined region because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Regarding claim 15 Shattil teaches a plurality of adjustment circuits coupled between an RF circuitry portion and active shields (see col. 9, lines 33-35, col. 31, lines 66-67 and col. 32, lines 1-7).

Regarding claim 16 Bethea teaches an adjustment circuit that includes a phase shifter and a variable gain amplifier (see col. 3, lines 55-58, col. 4, lines 29-32 and FIG. 3).

Regarding claim 17 Shattil teaches a control circuit (see col. 24, lines 44-46).

Regarding claim 21 Shattil teaches coupling an RF circuitry portion to an active shield (see col. 24, lines 61-67 and col. 25, lines 1-6). Shattil teaches an adjustment circuit (see col. 13, lines 53-57).

Regarding claim 22 Gratias and Bethea teach a device as recited in claim 20 except for phase shifting and amplifying a signal from an antenna before a signal reaches an active shield. Shattil teaches an active shield (see col. 5, lines 7-10). Shattil teaches phase shifting and amplifying a signal from an antenna (see col. 4, lines 53-60 and col. 5, lines 8-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include phase shifting and amplifying a signal from an antenna before a signal reaches an active shield because this would allow for a variable phase shifter circuit that controls the phase of a received signal from an antenna.

Regarding claim 23 Gratias and Bethea teach a device as recited in claim 22 except for feeding back from a sensor located in proximity to an active shield a signal which is used to vary the phase shifting and amplifying. Shattil teaches feeding back from a sensor located in

proximity to a cancellation circuit a signal which is used to vary the phase shifting and amplifying (see col. 27, lines 53-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include feeding back from a sensor located in proximity to an active shield a signal which is used to vary the phase shifting and amplifying because this would allow for a variable phase shifter and amplifier circuit that controls the phase of a received signal from an antenna.

Regarding claim 24 Gratias teaches creating an electromagnetic field by an antenna in a unit of a communication apparatus, in response to an antenna signal generated in the unit (see col. 3, lines 17-22). Gratias does not specifically teach generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using a plurality of active shields. Bethea teaches generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using an active shield (see col. 3, lines 38-55 and FIG. 2). Shattil teaches a plurality of active shielding material substantially canceling the effects of an electromagnetic field (see col. 5, lines 6-10, col. 24, lines 61-67 and col. 25, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using a plurality of active shields because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Regarding claim 26 Shattil teaches coupling an RF circuitry portion to an active shield (see col. 24, lines 61-67 and col. 25, lines 1-6). Shattil teaches an adjustment circuit (see col. 13, lines 53-57).

Regarding claim 27 Gratias, Bethea, and Shattil teach a device as recited in claim 22 and is rejected given the same reasoning as above.

Regarding claim 28 Gratias, Bethea, and Shattil teach a device as recited in claim 23 and is rejected given the same reasoning as above.

Regarding claim 29 Gratias teaches an apparatus including a unit for generating an electromagnetic field (see col. 3, lines 17-22). Gratias teaches generating an antenna signal; and creating an electromagnetic field, by an antenna, in response to the generated antenna signal (see col. 3, lines 15-22). Gratias does not specifically teach generating, a near field for substantially canceling the electromagnetic field in a predetermined region using a plurality of active shields. Bethea teaches generating, by the unit of the communication apparatus, a near field for substantially canceling the electromagnetic field in a predetermined region using an active shield (see col. 3, lines 38-55 and FIG. 2). Shattil teaches a plurality of active shielding material substantially canceling the effects of an electromagnetic field (see col. 5, lines 6-10, col. 24, lines 61-67 and col. 25, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include generating, a near field for substantially canceling the electromagnetic field in a predetermined region using a plurality of active shields because this would allow for an improved electric cancellation signal for canceling electromagnetic radiation.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gratias in view of Bethea, Shattil and Rinot.

Regarding claim 18 Gratias, Bethea, and Shattil teach a device as recited in claim 15 except for a number of active shields that is approximately four. Rinot teaches a number of active shields that is approximately four (see col. 4, lines 25-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include a number of active shields that is approximately four because this would allow for an electromagnetic protection device effective for isolating electromagnetic radiation of a mobile phone.

Response to Arguments

Applicant's arguments with respect to claim 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wong U.S. Patent Application 6,341,217 discloses a portable telephone with shielded transmission antenna.

Spann U.S. Patent Application 5,819,162 discloses an electro-magnetic interference shield for a telephone handset.

Liu U.S. Patent Application 6,359,216 discloses an electromagnetic wave shield pad for mobile phone.

Bickert et al. U.S. Patent Application 5,907,307 discloses an antenna for a portable radio communication device.

Woo U.S. Patent Application 6,681,125 discloses a wireless telecommunication terminal.

Martensson et al. U.S. Patent Application 6,442,377 discloses a radio telephone with high antenna efficiency.

Wong U.S. Patent Application 6,615,026 discloses a portable telephone with directional transmission antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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July 23, 2004

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